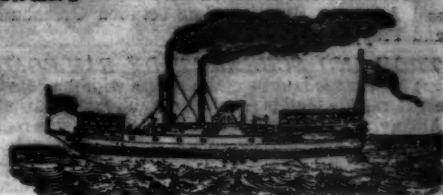
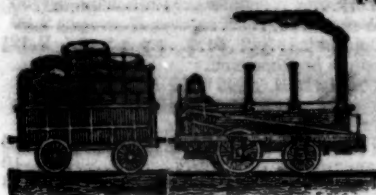


# AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY

AND MINES.

ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 105 CHESTNUT STREET, PHILADELPHIA, AT FIVE DOLLARS PER ANNUM.

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SATURDAY, FEBRUARY 6, 1847.

[WHOLE No. 555, VOL. XX.

## AMERICAN RAILROAD JOURNAL.

OFFICE AT THE FRANKLIN HOUSE,  
105 Chestnut Street,  
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, in advance.

### RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5 00

## BOSTON AND PROVIDENCE RAILROAD.

Passenger Notice. Summer Arrangement. On and after Monday, Sept. 28, 1846, the Passenger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m.

Accommodation Trains, leave Boston at 7½ a.m. and 3½ p.m., and Providence at 8 a.m. and 3½ p.m.

Dedham trains, leave Boston at 9 a.m.; 3 p.m., 5½ p.m., and 10½ p.m. Leave Dedham at 8 a.m. and 4½ and 9 p.m.

Stoughton trains, leave Boston at 11½ a.m. and 4-10 p.m. Leave Stoughton at 8 a.m. and 2½ p.m. All baggage at the risk of the owners thereof.

31 ly W. RAYMOND LEE, Sup't.

## BRANCH RAILROAD AND STAGES CONNECTING WITH THE BOSTON AND PROVIDENCE RAILROAD.

Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.—Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

## BOSTON AND MAINE RAILROAD.

Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Winter Arrangement, 1846-7.

On and after October 5th, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:

Boston for Portland at 7½ a.m. and 2½ p.m.

Boston for Great Falls at 7½ a.m., 2½ and 3-25 p.m.

Boston for Haverhill at 7½ and 11½ a.m., 2½, 3-25 and 5 p.m.

Boston for Reading at 7½ and 11½ a.m., 2½, 3-25 and 6½ p.m.

Portland for Boston at 7½ a.m., and 3 p.m.

Great Falls for Boston at 6½ and 9½ a.m., and 4½ p.m.

Haverhill for Boston at 7½, 8½, and 11 a.m. and 3 and 6½ p.m.

Reading for Boston at 7, 8½ and 9½ a.m., 12 m., 1½, 4 and 7½ p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

1y31 CHAS. MINOT, Super't.

## THE BEST RAILROAD ROUTE TO THE

Lake and Buffalo, from Cincinnati.

Take Cars to Xenia, 65

miles; take Stage to Mansfield, 88 miles; thence by Cars to Sandusky, 56 miles to the Lake; thence Steamboat to Buffalo, 230 miles.

Fare from Cincinnati to Sandusky.....\$3 00

" " Sandusky to Buffalo, Cabin..... 6 00

" " " " " Steerage..... 4 50

Fare by this route, although the cheapest across the state, will be reduced in a short time, railroad lengthened, and speed increased.

Leave Cincinnati in the morning, arrive at Columbus at night.

Leave Columbus in the morning, arrive at Sandusky same day.

Leave Sandusky, by Boat, in the morning, arrive at Buffalo next morning in time for the Cars north and east for Niagara Falls, Canada, Saratoga Springs, Troy, Albany, Boston, New York, Washington, or Philadelphia.

Passengers should not omit to pay their fare through from Cincinnati to Sandusky, or from Columbus to Sandusky via Mansfield; as this route is the only one that secures 56 miles (this road is run over in 2h. 50m.) most railroad which is new, and is the shortest, cheapest and most expeditious across the state.

Fares on the New York railroads are about to be reduced.

31 ly B. HIGGINS, Sup't, etc.

Sandusky, Ohio. M. & S. C. R. R. Co.

## SUMMER ARRANGEMENT—NEW YORK AND ERIE RAILROAD LINE, from April

1st until further notice, will

run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

### FOR PASSENGERS—

Leave New York at 7 A. M. and 4 P. M.

" Middletown at 6½ A. M. and 5½ P. M.

FARE REDUCED TO \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

### FOR FREIGHT—

Leave New York at 5 P. M.

" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts. H. C. SEYMOUR, Sup't. March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board. 13 tf

## NORWICH AND WORCESTER RAILROAD.

Summer Arrangement, commencing

Monday, April 6, 1846.

Accommodation Trains, daily,

except Sunday. Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1½ p.m. train from Boston.

New York Train via Long Island Railroad:

Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4½ p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday. Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars.

31 ly J. W. STOWELL, Sup't.



### TROY RAILROADS.—IMPORTANT NOTICES.

Troy and Greenbush Railroad, forming a continuous track from Boston to Buffalo and Saratoga Springs. This road is new, and laid with the heaviest iron H rail. Trains will always be run on this road connecting at Greenbush each way with the trains to and from Boston and intermediate places, leaving Greenbush daily at 1 1/2 p.m. and 6 p.m., or on arrival of the trains from Boston; leave Troy at 7 1/2 a.m. and 4 1/2 p.m., or to connect with trains to Boston. Trains also run hourly on this road between Troy and Albany. Running time between Greenbush and Troy, 15 minutes.

### TROY AND SCHENECTADY RAILROAD.

This road is laid its entire length with the heaviest H rail, which is not the fact with the road from Albany. Trains will always be run on this road connecting each way, to and from Buffalo and intermediate places. Leave Troy for Buffalo at 7 1/2 a.m. and 1 p.m. and 6 1/2 p.m., or to connect with the trains for the west; leave Schenectady at 2 1/2 a.m., 8 1/2 a.m., 1 p.m. and 3 1/2 p.m., or on arrival of the trains from Buffalo and intermediate places.

### TROY AND SARATOGA RAILROAD.

#### THE ONLY DIRECT ROUTE.

No change of passenger, baggage or other cars on this route. Cars leave Troy for Ballston, Saratoga Springs, Lake George and White Hall at 7 1/2 a.m., (arriving one hour in advance of the train from Albany,) and at 3 1/2 p.m. Returning, leave Saratoga at 9 a.m. and 3 1/2 p.m., (reaching Troy in time for the evening boats to New York.) Cars also leave Troy for the Burrough at 3 1/2 p.m. and 7 p.m., connecting with packet boats for the north. This takes passengers from New York and Boston to Montreal in 44 hours.

N.B. Travellers will find the routes through Troy most convenient and economical, and as expeditious as any other. The steamboats to and from New York land within a few steps of the railroad office, and passengers are taken up and landed by the different railroad lines at the doors of principal hotels, thus saving all necessity for, and annoyance from, hack drivers, cabmen, runners, etc.

Aug. 3, 1846.

1y 32

### BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the Great Western Mail leaves Bal-

timore every morning at 7 1/2 and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pitsburgh. Time of arrival at both Cumberland and Baltimore 5 1/2 P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

### WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 a night from Baltimore and at 6 A. M. and 5 1/2 P. M. from Washington, connecting daily with the line North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. 313y

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warrant equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER 17 Burling Slip.

1y10

New York.

### NEW RAILROAD ROUTE FROM BUFFALO TO CINCINNATI.

Passengers destined for Columbus and Cincinnati, O., Louisville, Ky., St. Louis, Mo., Memphis, Tenn., Vicksburg, Natches, New Orleans, and all intermediate ports, will find a new, and the most expeditious and comfortable Route, by taking Steamboats at Buffalo, landing at Sandusky City, Ohio, distance.....230 miles.

From thence by Cars, over the Mansfield Railroad which is new and just opened [laid with heavy iron,] to Mansfield, distance.....56 " Thence by Stage via Columbus to Xenia over gravel and Macadamized Road, (the best in the state,) in new coaches, distance.....88 " Thence, over the Little Miami Railroad, from Xenia to Cincinnati, distance.... 65 "

#### TIME.

From Buffalo to Sandusky.....24 hours. Leave Sandusky 5 a.m. to Columbus.... 14 " From Columbus to Cincinnati..... 15 " Or say 30 hours from Sandusky to Cincinnati over this route, including delays.

#### FARE.

From Buffalo to Sandusky, Cabin.....\$6 00 " " " Steerage..... 3 00 " Sandusky to Columbus..... 4 50 " " " through to Cincinnati..... 8 00

Passengers should not omit to pay their fare through from Sandusky City to Cincinnati and take receipts availing themselves of the benefit of a contract existing between the said Railroad and Stage Co's, securing 121 miles travel by good Railroad and 88 miles by Stage, in crossing from Lake Erie to the Ohio river, in the space of 30 hours.

Passengers destined for St. Louis, or any point below on the Mississippi, will save by taking this route, from 4 to 6 days time and travel, and nearly half the expense, over the Chicago and Peoria route to the above places.

Fare by this route, although the cheapest, will in a short time be reduced, Railroad lengthened, and speed increased.

B. HIGGINSON, Sup't, etc.

M. & S. C. R. R. Co.

Sandusky City, Ohio.

### NEW YORK & HARLEM RAILROAD CO.—Winter Arrangement.

On and after Monday, November 23, 1846, the cars will run as follows:

Leave 27th street for 42d street, Deaf and Dumb Institute, Yorkville, Harlem Morrisania, and Williams' Bridge, at 7 o'clock a.m. From City Hall for above named places, 2 p.m. [freight train,] 2 30 p.m. 5 p.m. to Morrisania only.

Leave City Hall for Harlem, Morrisania, Fordham and Williams' Bridge, at 7 45 a.m., and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train,] 2 30 p.m. and 3 45 p.m.

Leave City Hall for Hunt's Bridge, Bronx, Tuckahoe, Hart's Corners White Plains, Davis' Brook, Unionville and Pleasantville, [Pleasantville 4 miles from Sing Sing,] 7 45 and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train,] and 3 45 p.m.

#### RETURNING.

Leave Pleasantville, at 8, 10, [freight train,] and 11, a.m.; 1 30, and 4, p.m.

Leave White Plains, at 8 12, 10 30, [freight train] and 11 20 a.m.; 1 50, and 4 20, p.m.

Leave Tuckahoe, 8 35, 10 55, [freight train,] and 11 35, a.m.; 2 05, and 4 35, p.m.

Leave Williams' Bridge at 7 45, 8 50 and 11 50 a.m.; 2 50, 4, and 4 50 p.m.

Leave Morrisania 8 and 9 05 a.m.; 12 05, 2 35, 4 20, 5 05 and 6 p.m.

Leave Yorkville, at 8 12 a.m.; 4 35 and 6 15 p.m.

#### SUNDAY ARRANGEMENTS.

Leave City Hall for Pleasantville and intermediate places, at 7 45 a.m.; 1 15 and 3 p.m.

Leave Pleasantville for City Hall, at 8 a.m.; 11, and 3 15 p.m.

Leave City Hall for Williams' Bridge and intermediate places, 10 45 a.m.; 2 30 p.m.

Leave Williams' Bridge for City Hall, at 8 50 and 11 50 a.m.; 1, 3 45 and 4 05 p.m. 1y49

### BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Balti-

more and York.—The Passenger trains run daily, except Sunday, as follows: Leaves Baltimore at.....9 a.m. and 3 1/2 p.m. Arrives at.....9 a.m. and 6 1/2 p.m. Leaves York at.....5 a.m. and 3 p.m. Arrives at.....12 1/2 p.m. and 8 p.m. Leaves York for Columbia at.....1 1/2 p.m. and 8 a.m. Leaves Columbia for York at.....8 a.m. and 2 p.m.

#### FARE.

Fare to York.....\$1 50 " Wrightsville..... 2 00 " Columbia..... 2 12 1/2 Way points in proportion.

### PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....\$9 Or via Lancaster by railroad..... 10 Through tickets to Harrisburg or Gettysburg... 3 In connection with the afternoon train at 3 1/2 o'clock, a horse car is run to Green Spring and Owning's Mill, arriving at the Mills at.....5 1/2 p.m. Returning, leaves Owning's Mills at.....7 a.m.

D. C. H. BORDLEY, Sup't.

31 ly Ticket Office, 63 North st.

### LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9, from Frankfort, other hours as above.

351y

### SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston,

on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tusculum Railroad in N. Alabama. Fare through from Charleston to Montgomery daily.....\$26 50 Fare through from Charleston to Huntsville, Decatur and Tusculum..... 22 00

The South Carolina Railroad Co. engage to receive merchandise consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad. 1y25 JOHN KING, Jr, Agent.

### CENTRAL RAILROAD—FROM SAVANNAH to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, \$8 00. Freight—

On weight goods generally.... 50 cts. per hundred. On measurement goods..... 13 cts. per cubic ft. On brls. wet (except molasses and oil).....\$1 50 per barrel.

On brls. dry (except lime).... 80 cts. per barrel. On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.

On hhds. and pipes of liquor, not over 120 gallons.....\$5 00 per hhd. On molasses and oil.....\$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE, y40 Gen'l. Sup't. Transportation.

### MANUFACTURE OF PATENT WIRE

Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by JOHN A. ROEBLING, Civil Engineer, Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition. 2y191y



**CENTRAL AND MACON AND WESTERN RAILROADS, GA.**—These Roads with the Western and Atlantic Railroad

of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macon—Central Railroad ..... 190  
Macon to Atlanta—Macon and Western ..... 101  
Atlanta to Oothcaloga—Western and Atlantic. . 80  
Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings..... \$0 50 To Atlanta. \$0 75 To Oothcaloga.  
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones..... 0 50 0 62½  
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot..... 0 20 0 36  
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot..... 0 20 pr. 100 lbs. 35  
Crockery, per cubic foot..... 0 15 " 35  
Molasses and Oil, per hhd., (smaller casks in proportion). 9 00 12 50  
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each..... 1 25 1 50  
Ploughs, (small,) and Wheelbarrows..... 0 80 1 05  
Salt, per Liverpool Sack..... 0 70 0 95  
Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.

Goods consigned to the subscriber will be forwarded free of Commissions.

Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R. Savannah, Aug. 15th, 1846. 1y34

**GREAT SOUTHERN MAIL LINE! VIA** Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in eleven, Petersburg in thirteen and a half hours, and Charleston, S. C., in two days from Baltimore.

Fare from Baltimore to Charleston.....\$21 00  
" " " Richmond..... 6 60

For Tickets, or further information, apply at the Southern Ticket Office, adjoining the Washington Railroad Office, Pratt street, Baltimore, to 1y14

**STOCKTON & FALLS, Agents.**  
**RAILROAD SCALES.—THE ATTENTION** of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.  
Factory, 9th street, near Coates, cor. Melon st.  
Office, No. 3 North 5th street, Philadelphia, Pa. 1y25

**GEORGIA RAILROAD, FROM AUGUSTA TO ATLANTA—171 MILES.**

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

**RATES OF FREIGHT.**

	Between Augusta and Oothcaloga, 80 miles.	Between Charleston and Oothcaloga, 388 miles.
1st class. Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	\$0 16	\$0 25
2d class. Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	0 90	1 40
3d class. Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Bar and Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 55	0 75
4th class. Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Feathers, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 37½	0 62½
Cotton, per 100 lbs.....	0 45	0 65
Molasses, per hogshead.....	8 50	13 50
" " barrel.....	2 00	3 25
Salt per bushel.....	0 17	
Salt per Liverpool sack.....		95
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows.....	0 75	1 37

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,  
Ch. Eng. and Gen. Agent.  
Augusta, Sept. 2d, 1846. \*44 1y

**THE WESTERN AND ATLANTIC Railroad.**—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,  
Chief Engineer.  
Atlanta, Georgia, April 16th, 1846. 1y1

**TO RAILROAD COMPANIES AND MANUFACTURERS** of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,  
E. cor. 12th and Market sts., Philad., Pa. 1y

**LITTLE MIAMI RAILROAD.—OPEN TO SPRINGFIELD—Distance 84 miles.**

connecting at Xenia and Springfield with Messrs. Neil, Moore, & Co's. daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City, via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columbus, Delaware, and the Mansfield and Sandusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as follows: Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 25 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon....\$1 00  
" " " Xenia..... 1 50  
" " " Springfield... 2 00  
" " " Columbus... 4 00  
" " " Sandusky city 8 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company, on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every \$500 in value over that amount.

The 1½ P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.  
47th W. H. CLEMENT, Supt.

**PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.**

Winter Arrangement.

Philadelphia for Baltimore...8 a.m. and 4 p.m.  
Baltimore for Philadelphia...9 a.m. and 8 p.m.

Connecting in Baltimore with Mail Lines south and west, as per notice of the Baltimore and Ohio Railroad—and with Mail Lines north from Philadelphia, both morning and afternoon.

Sundays, the Morning Lines do not run in either direction.

Accommodation train from Wilmington to Philadelphia, leaves Wilmington at 8 a.m., and returns at 2 p.m.

J. R. TRIMBLE,  
2d Engineer and General Superintendent.

**LAWRENCE'S ROSENDALE HYDRAULIC CEMENT.** This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,  
142 Front street, New York.

Orders for the above will be received and promptly attended to at this office. 39 1y

**SPRING STEEL FOR LOCOMOTIVES.**

Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN P. WINSLOW, Agent,  
Albany Iron and Nail Works,



**VALUABLE PROPERTY ON THE MILL Dam For Sale.** A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 ft, with lathes, work benches, Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 ft, two stories high, with a shed part 45x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 51x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja4

**TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.**

#### PASCAL IRON WORKS.

##### WELDED WROUGHT IRON TUBES

From 4 inches to 4 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T, L, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by  
**MORRIS, TASKER & MORRIS.**  
Warehouse S. E. Corner of Third & Walnut Streets,  
**PHILADELPHIA.**

#### PATENT INDESTRUCTIBLE WATER

Pipes. The subscribers continue to manufacture the above Pipes, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly *indestructible*. The prices are less than those of iron or lead. We also manufacture Basins and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

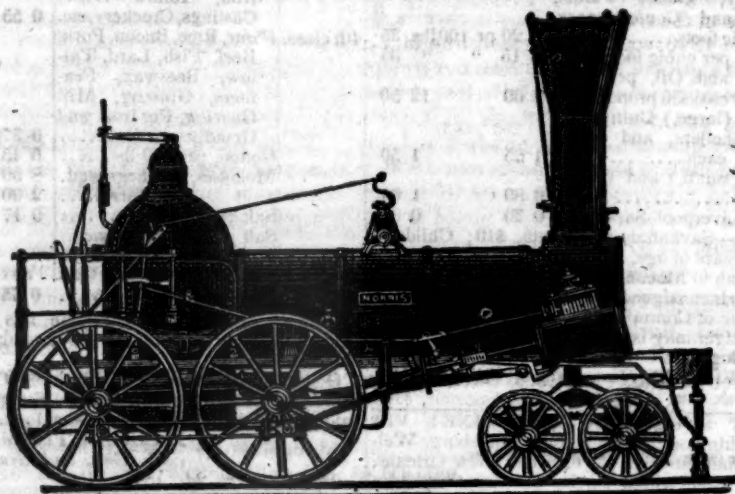
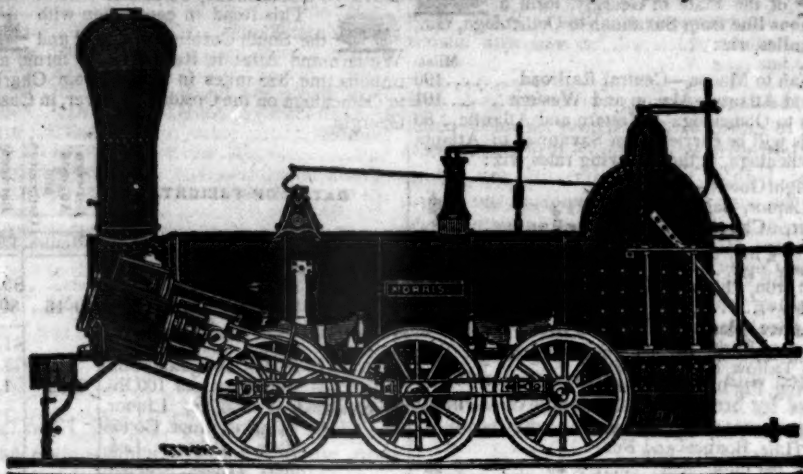
J. BALL & CO.

**TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS.** Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufacture and for sale by

**MORRIS TASKER & MORRIS,**  
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 1st

## NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



**MANUFACTURE** their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15 inches Diameter of Cylinder,	× 20 inches Stroke.
"	2,	14	" " × 24 " "
"	3,	14½	" " × 20 " "
"	4,	12½	" " × 20 " "
"	5,	11½	" " × 20 " "
"	6,	10½	" " × 18 " "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion. Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

**NORRIS, BROTHERS.**

#### THE NEWCASTLE MANUFACTURING

Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

**ANDREW C. GRAY,**  
President of the Newcastle Manuf. Co.

#### RAILROAD IRON AND LOCOMOTIVE

Tyres imported to order and constantly on hand by  
**A. & G. RALSTON**  
4 South Front St., Philadelphia.

#### KEARNEY FRIE BRICK. F. W.

BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, } New York.  
Peter Cooper, }  
Murdoch, Leavitt & Co. }  
J. Triplett & Son, Richmond, Va.  
J. R. Anderson, Tredegar Iron Works, Richmond, Va.  
J. Patton, Jr. } Philadelphia, Pa.  
Colwell & Co. }  
J. M. L. & W. H. Scovill, Waterbury, Conn.  
N. E. Screw Co. } Providence, R. I.  
Eagle Screw Co. }  
William Parker, Supt. Rost. and Worc. R. R.  
New Jersey Malleable Iron Co., Newark N. J.  
Gardiner, Harrison & Co. Newark, N. J.  
25,000 to 30,000 made weekly.



## State Works of Ohio.

The Columbus correspondent (probably one of the Editors) of the Cincinnati Gazette—in a late letter—gives the following account in relation to the Internal Improvements and Public Works of the State of Ohio, which will be read with interest. The writer says:

In the absence of any proceedings of interest in either House, I have devoted considerable time to an examination of the finances of our Public Works—deriving my details from the very interesting Report of the Board, and from such other sources as were necessary. They are in fact the financial barometer of the State, our tax roll increasing or diminishing with the receipts from our Canals. It is a well known fact that more money has leaked out at the Treasury through those charged with our public improvements, than wasted by breeches—and we have Governor Marcy's authority for saying the latter are something of an item.

The first fact cognizant by the report is this—a reduction in the expenditures and an increase in the receipts. This is cheering—for since 1840, with an increased line of Canals and a greatly increased debt, our receipts have been growing beautifully less. Four hundred and twenty-two miles of Canals, with over nine millions six hundred and fifty thousand dollars of debt, added from 1836 to 1840, and yet forsooth a decrease in receipts from the very year the people hoped to find some relief.

## EASTERN DIVISION:

Comprising the Ohio, Walholding, and Hocking Canals, Muskingum Improvements, and Eastern part of the National Road, is under the superintendence of Jacob Blickensaderfer, Junior.

## Ohio Canal.

Receipts from Tolls, Fines and Waters.	\$336,339 69
Disbursement for same period.....	69,371 50
Nett receipts.....	\$266,968 19
Increase of Tolls, &c., over last year..	\$75,970 36
Decrease of expenses do.....	47,967 34
Nett gain .....	\$123,937 70

The repairs, it appears from the Report have been extensive, and several substantial and economical improvements introduced, as substituting cast iron arches in place of decayed stone culverts.

Cost of the Ohio Canal, including branches.....	\$4,695,203 00
Interest on same, do. do.....	281,712 18
Nett receipts, do. do.....	266,968 19

Our first work of Public Improvement promises well. It has no foreign carrying trade—dependent entirely upon its own resources. Besides, the increase from tolls on the cereal product, which, as the country improves, will be greatly augmented, it has other sources of revenue in the immense beds of iron and coal in the north-eastern part of the State, with water power on the spot. The miserable policy of opening the sluice-ways for the pauper labor of Europe can alone retard their proper development.

The table annexed is an interesting one, showing that the export exceed the import as 5 to 1; wheat and flour constituting 3-7 of

the former, and the coal trade 1-7 of the entire business of the canal.

Articles.	Cleveland.		Portsmouth.	
	Arrived	Cleared	Arrived	Cleared
Wheat and Flour.....	89,886	186	4424	771
Coal.....	29,782	207	4424	788
Corfl.....	15,620	332	3752	788
Pork, Bacon and Lard,	8198	25	8790	33
Iron (all kinds) & Nails,	7377	642	42	3967
Lumber.....	2408	5987	315	86
Salt.....	2408	8830	27	876
Merchandise.....	1140	5293	358	3143
All other articles.....	33190	5649	9344	1768
Tons.....	187601	27151	27054	11429

## Hocking Canal.

Receipts from Tolls, Rents and Fines..	\$5,383 54
Disbursements for Superintendence, &c.	3,651 13
Cost of the Hocking Canal.....	\$1,732 41
Interest on same.....	\$975,481 01
Receipts on Running expenses.....	58,528 86
There is an item of \$1,050 13 in the Report, which belongs to construction account, and of course not included in the estimate of the profit and loss of each work.	1,732 41

There is an item of \$1,050 13 in the Report, which belongs to construction account, and of course not included in the estimate of the profit and loss of each work.

## Walholding Canal.

Receipts from Tolls, Rents and Fines..	\$1,190 70
Disbursements for Superintendence, &c.	1,383 54
Cost of Construction.....	\$607,268 99
Interest on same.....	36,436 13
Excess of Expenditure over Receipts..	122 84

There was a decrease in the disbursements this year over the last, of \$1,754 07; receipts were less by \$92 25. There was not a supply of boats for the business.

## WESTERN DIVISION:

Consisting of the Miami and Warren county Canal, Miami Extension, and Wabash and Erie Canals, Western Reserve and Maumee Road, and Western Division of National Road, under charge of the veteran Forrer.

The Miami and Extension, with the Wabash and Erie, should properly be considered together, as tolls are received at Cincinnati and Toledo for all through freight, which makes the central portion appear to great advantage. As there is some local interest with your readers in the first, it is separated.

## Miami Canal.

Receipts from Tolls, Rents and Fines,	\$93,057 28
Disbursements for large Repairs, Superintendence, &c.....	54,344 29

Nett Receipts.....	\$38,712 99
Increase in Receipts over last year..	15,813 50
Cost of Construction of Miami and Warren Canal.....	\$1,237,552 00
Interest on the same.....	74,253 00
Nett Receipts.....	38,712 99

The expenses for repairs were unusually heavy, and the Canal had been so long neglected as to render it difficult of navigation, by being filled up with sand and mud. To clear it was a very large item. It was also obstructed by ice forty-nine days, and nearly a month lost by breaks, which would not have occurred, if it had been kept in proper order.

## Extra Expenses.

Hamilton and Cincinnati Culvert.....	\$7,314 17
New Tumbles, Bridges, &c.....	2,063 24
Removing the Deposits.....	23,000 00

Add nett Receipts as above.....	\$31,376 41
	38,712 99
	\$70,089 41

This would exceed the interest account by \$7,888 00. Including Warren county Canal, is adding \$200,000 to the cost, and not a cent income.

## Miami Extension and Wabash Canals.

Cost of Miami Extension from Dayton to mouth of Loramie's Creek.....	\$436,750 60
Loramie's Creek to north end of Deep Cut.....	1,379,367 33
Deep Cut to junction of Wabash and Erie Canals.....	323,600 00
Cost of Sydney Feeder.....	392,358 33
" " Mercer County Reservoir.....	528,222 07
Cost of Construction.....	3,059,998 31
Damages, Hydraulic Sites, &c.....	108,967 28
Cost of Wabash and Erie Canal.....	3,057,177 94

Cost of Miami Extension and Wabash and Erie Canals.....	6,226,142 83
Receipts from Miami Extension.....	27,812 90
" " Wabash and Erie Canals.....	113,414 59
Disbursements on Miami Extension..	\$141,227 49
" " Wabash and Erie Canals.....	19,100 88
	8,135 10
	\$27,333 96

Interest on the united cost of both Works..... \$373,568 52  
Nett Receipts on the same..... \$113,991 51  
There is an item in the Report of \$28,301, which belongs to Construction account.

If no untoward accident occur the coming season, these Canals, united with the Miami, will show a favorable account. The miserable manner the wooden locks were constructed, proved a constant source of annoyance to shippers, and loss to the State. By the indomitable perseverance of Mr. Forrer they were kept in navigable order, and are now in good condition.

Mr. Forrer gives very encouraging assurances of the truth of the above, as the extract annexed will show. He further adds that the amount of corn shipped from Toledo to Cleveland—one and a half millions of bushels—is about the same as the official report of the total received in Albany. The reduction of tolls for through freight tended materially to bring the carrying trade on this route, which another season will more fully develop.

"Flour has increased 40,333 barrels, pork 10,362 barrels, wheat 98,603 bushels, candles 39,918 lbs., tobacco 546,961 pounds, bacon and pork in bulk 1,054,810 pounds. The aggregate of lard, pork and bacon, in barrels and bulk, received at Toledo, amounts to twelve millions seven hundred and sixty-six thousand one hundred and ninety-one lbs., exhibiting an increase this year in the item of lard alone, of 3,015,168 pounds. Corn has increased from 30,037 bushels in 1845, to 1,135,946 bushels this year, showing an increase considerably exceeding a million of bushels. The amount of merchandise shipped on the Wabash and Erie Canal at Toledo, shows a total of 10,595,087 pounds, exceeding a trifle the amount shipped on the Ohio Canal."

There is one consideration necessary to be borne in mind. The collectors on the Canal, though appointed by the Board of Public Works, have nothing to do with it in their



account. They are in fact the Auditor's agents for the collection of the revenue, and accountable only to him—thus forming a salary check. But still their salaries, overcharges, if any, are deducted from the amount received from the canal proceeds. This will explain any slight discrepancy in the Auditor's aggregates and that of the Board. I make this explanation as perhaps not generally known.

In my next the roads in charge of the Board of Public Works will be alluded to, as well as some matters connected with the lands donated to the State.

Statement of Length, Cost, Receipts, Deficits, etc., of the Ohio Canals, for 1846.

	Length, Miles.	Total Cost.	Cost per Mile.	Gross Receipts.	Net Receipts.	Interest or Cost of Each.	Deficit.
Ohio Canal and Branches	337	4,965,303	13,932	336,339	366,968	281,712	14,743
Muskingum Improvement..	91	1,627,318	17,882	36,104	.....	97,840	97,840
Walhonding Canal.....	25	607,968	24,300	1,190	.....	36,436	36,628
Hooking Canal.....	56	975,461	17,419	5,383	.....	58,528	56,796
Miami and Warren Canal..	86	1,237,652	14,569	93,057	38,712	74,253	35,541
Miami Extension Canal..	139	3,168,965	22,798	87,912	.....	190,137	181,495
Wabash and Erie Canal..	90	3,057,177	33,968	113,414	105,279	183,430	78,151
Totals.....	821	\$15,368,964	Av. \$18,719	\$612,303	\$491,404	\$922,137	\$501,196

\* The Ohio Canal has 27 miles of Side Cuts and Feeders—to wit: Trenton feeder 3 miles, Walhonding 14, Dresden Side Cut 24, Granville feeder 6, Columbus 12—which are included in the estimate.  
† This includes the Sidney Feeder, 13 miles, St. Mary's and Reservoir.  
‡ The Wabash and Erie has a Side Cut to Maumee, 2 miles, included in estimate, and one to Toledo of 1 mile, which was not observed until too late to be rectified.

The nett proceeds fall a fraction short of three per cent interest on the total cost. Interest estimated at six per cent., which would be about the average—first loan at five, the last at seven—balance at six.

#### Further Extracts from English Papers.

**Dublin and Holyhead Packets.**—The Dublin and Holyhead Railway Company are about to build four iron steam-packets, to run to and from Dublin, in conjunction with the railway. They are to be of first-rate designs, and in order to encourage competition, and secure good vessels, they have most liberally determined to offer a premium of £1000 to the builder of the boat which, in the course of 12 months, makes the quickest passages, with the smallest amount of repairs.

**Railway Calls.**—The amount of calls, payable on English Railway stock during January, amounts to £4,399,466; and on fo-

reign lines, £1,271,000, one-fourth or £317,750 of which, it is calculated, will be paid from England: making a total for the month of £4,717,206.

**Railway Traffic Returns.**—From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2760 miles of railway, was £129,656, thus accounted for: £64,434 for the conveyance of passengers only, £37,287 for the carriage of goods, and a remainder of £27,944 for passengers and goods together, not respectively apportioned: being an increase over the corresponding week of last year of £13,494.

**Cornish Steam Engines.**—The number of pumping-engines reported for the month of November, is 24; the quantity of coals consumed being 1471 tons, lifting, in the aggregate, 14,000,000 tons of water 10 fathoms high; the average duty of the whole is, therefore, 53,000,000 lbs. lifted 1 foot high, by the consumption of a bushel of coal.

**New Locomotive Mechanism.**—A working model of a new plan of railway locomotion has been exhibited in London, with a view as stated, to the adoption of means for securing the great objects at which railway enterprise aims, namely, safety to human life, certainty of action, and economy in construction and working. By the new plan, the carriages are proposed to be built upon platforms which will glide on the peripheries of parallel lines of wheels, mounted on chains, stanchions or piles, rendering rails and bridges unnecessary. An immovable rope or chain forms a fulcrum, against which the motive power is to be applied. The rope or chain passes round a drum fixed on a travelling platform, the drum being set in motion by a small engine fixed on either side of it, on the platform, underneath which ribs, or flanges, about a foot in depth, make it difficult, if not impossible, for it to get off the wheels. The line of traction being invariably in the middle of the road, it is contended that no probable cause of accident can occur to disturb it, and that it will avoid the great danger incident to railways from the breaking of an axle, a wheel, or a rail, or from a sharp curve. An experimental road, of about a mile in length, is to be constructed near the metropolis.

#### Mr. George Stephenson's New Locomotive.

—We some months back mentioned, that Mr. George Stephenson, C. E., had invented a three cylinder engine, that is, one with two outside cylinders acting both together the same way and in the same place, and a third cylinder, with a crank in the middle of the axle, at right angles to the plane and crank pins of the two other cylinders. The middle cylinder is double the capacity of either of the other two. We understand that the compensation by this middle cylinder is so perfect that not the least wriggle takes place at the highest velocities. Its power is said to be such, that it starts off like an arrow from a bow. If this invention succeed, it will annihilate the last and final point contended for by Mr. Brunel as a merit of the broad gauge, that is, power. Far more pow-

er will be able to be thrown into the engine, than any road can well bear.

**Indian Railways.**—The following, we learn from the "Times," of Thursday, are the conditions upon which the Board of Control and the Directors of the East India Company have at length decided upon giving their sanction to the introduction of railway communication into British India.

1. The Direct Trunk, or East India line, is adopted.

2. This line (which connects Calcutta with the North-west Province) is to be constructed in sections.

3. The Government guarantee 4 per cent. to the Shareholders.

4. The amount guaranteed is fixed at £3,000,000 to commence with.

5. The section out of Calcutta to be first executed.

6. The guarantee to extend over 15 years.

7. The rates of payment to be made by the Government for transport of mails, troops, stores, etc., to be agreed upon hereafter.

8. The interest to be received either in India or in London, at the option of the Shareholders, as soon as £500,000 is paid into the India House.

9. The land to be obtained by the Government for the Railway Company.

10. Government to have the privilege of purchasing the railway, after 30 years from the date of its completion, at the then fair market value of the property.

11. No limitation is to be fixed to the profits of the Company, but the rates of charges are to be reduced when the returns admit of it.

12. It is also understood that no rates or tolls will be assessed upon the Railway Company, and that the import duties on the stock and materials for the railway will be remitted.

13. The Company to be incorporated by an Act of the Legislative Charter, as well as by Charter.

These terms show that the Indian Government are fully sensible of the great benefits which railways will confer on India, in military and commercial respects, and their readiness to hasten their introduction, by giving all the encouragement and assistance that they are able to afford. Certainly more liberal conditions railway promoters could scarcely expect.

**The Snow and the Rail.**—On Tuesday night, at six o'clock, the express train on the York and Newcastle Railway left Darlington, being about an hour and a half behind its usual time, having been detained by the depth of the snow. The road was heavy all the way, and an additional engine was put to at Belmont; but there was no stoppage caused by the snow till they reached Washington, which they did about eight o'clock. At Washington station the train stopped half an hour, and it being reported that the line was passable, it proceeded; but it had not gone more than half a mile when it was brought to a stand-still. The engine-men and stokers who were prepared with shovels, partially cleared away the snow which had drifted in



the path of the engines, and the steam was again put on. Another half mile was got over; but further progress was found to be impracticable. The snow drifted round the carriages with such rapidity, that in a very few minutes it was found impossible to move them either one way or the other, and the snow gathering around the engines, soon extinguished the fires, and rendered all attempts to self-extrication hopeless. In this dilemma what was to be done? Two gentlemen, second-class passengers, determined on walking onward through the snow; and away they went, steering in the direction of the telegraphic wires. As they have not been heard of since, it is probable they succeeded, after many difficulties, of course, in reaching their destination, wherever it was. One gentleman, returning from the hymeneal altar, having been married but a few days previously in London, and was bringing home his bride, suggested to his *cara sposa* the expediency of returning to Washington, where a comfortable bed might be found more convenient for repose than the interior of a railway carriage, and the suggestion having been approved, the adventurous pair essayed the difficult and dangerous task. There were other ladies in the train, which comprised fifteen passengers in all, including the two that had already departed, but none thought proper to imitate her example. Five gentlemen escorted the bride and bridegroom, leaving behind them in the train three ladies and three gentlemen, who remained there till noon on Wednesday, when they also repaired to Washington, under the guidance of the engine-drivers, leaving Donaldson, the guard of the train, alone. All parties reached Washington in safety, and found comfortable accommodation at the inn near the station, and at the village in its vicinity. This is, perhaps, the first instance on record of a railway train having been buried in the snow.—*Chronicle*.

**Eastern Counties vs. Eastern Union Railways.**—The Directors of the Eastern Union Railway have lately placed on their line second-class carriages of a greatly improved construction, and in which the comfort of the passengers has been studied in a manner worthy of imitation. They are enclosed with glass, and the seats are of stuffed leather, and they altogether approximate much nearer to the English elysian—Comfortable, than those in general use. But, unfortunately, the Eastern Union authority extends only sixteen miles of the sixty-six between Ipswich and London; and on Tuesday a peremptory order from the *magnates* of Shoreditch was received at the Colchester station that the new Eastern Union second-class carriages should not be suffered to proceed beyond Colchester. The passengers were accordingly obliged to resign their warm seats in the Ipswich carriages, and locate themselves in the Eastern Counties Railway tumblers for the remainder of the journey.—*Essex Standard*.

[We shall feel obliged by the Eastern Counties authorities informing us whether the above is true. Ed. "H. R. J."]

**Good!**—Lord George Bentinck, at Hudson's festival at York, made so good a speech

on Railways, that it merits registration in our columns. He observed.

It has been said by the great Minister of France, that railways, next to the art of printing, have been the most powerful instruments that the ingenuity of man ever devised for the civilization of the world. And if my right hon. friend cannot claim for himself the invention which he has carried out, at least he can claim, more than any other man in the world, that he has carried that invention into practice. Who is there here that does not feel the advantage which the invention of George Stephenson, carried out by George Hudson, has produced? We all remember the state of distress that cast a gloom over the entire empire in 1839 and 1840. 40,000 able bodied laborers were in the workhouse, the revenue was falling off, and there were 1,500,000 paupers upon the poor rate. Railways were at a discount. My right hon. friend stepped forth, and set a noble example. He roused the talent and dormant energies of his countrymen—he urged them to action—and it is owing in the greatest degree to his exertions that railways have been since constructed, which are daily giving employment to 200,000 laborers, at wages averaging 22s. 6d. per week. Hence the prosperity of the last few years. But that is not all. We have heard to-day what the city of York has gained in the article of coals alone. We hear much of cheap justice at every man's door, but, I think, at this inclement season of the year, when winter has laid her frosty hand upon the earth, we must all feel that cheap fuel for the poor man's hearth is at present a far greater blessing than any other that can be conferred upon him; and it is to my right hon. friend that the poor of the city of York are indebted for the blessing. Where they once paid, as I have been told, 16s. 6d. per ton for their coals, before railways were established, they now pay 6s. 6d. The advantage also extends to the rich; and here we are to-day from London, having breakfasted there by daylight, and been brought in daylight too, for a less sum of money than a few years ago it would have cost us to have paid our post boys and turnpike tolls on the road. But then we are told that my hon. friend seeks nothing but his own profit. Why, who but the most niggardly minded men can do otherwise than rejoice at the splendid fortune he has achieved? Talk of commerce or enterprise without profit! Why, profit is the aliment—profit is the very breath of enterprise and commerce. Deny to commerce and enterprise her just profit, and few years will elapse before the enterprise of England will subside; and instead of being at the head we shall be at the tail of all the nations in the world. Most intimately allied, inseparably blended with the enterprise of my hon. friend is the great inventor who honors us with his presence to-day; one whose name will live in the pages of history, when the names of warriors and of kings; unless it is of him who stands beside me; shall have passed into oblivion. Not at this day only, but in all time to come, the name of George Stephenson will be remembered and honored. It will be

revered by him whose lot it is to labor, and who obtains his fuel cheap. It will be remembered by every farmer whose corn is carried to market for him at 4s. to 5s. per quarter less than before. It will be remembered by every merchant and every commercial man who profits by the invention of railways. It will be remembered by every country that has an army to be paid to keep the civil peace, for we have been told that railways have in this country made a little army do the work of a great one. I think, then, when we look at all these things, we must agree with the Minister of France, that the art of printing alone surpasses the invention of which George Stephenson is the great author. His lordship concluded by proposing the health of "George Stephenson, Esq."

**Forth and Clyde Canal.**—From the half yearly abstract statement of this company's affairs, says the North British Railway Journal, has just been issued, we observe the surplus revenue for the six months ending 30th September, amounted to . . . £26,539 12 7 and the previous balance on hand to . . . 3,169 7 9

Leaving . . . £29,707 0 0 applicable for a dividend of £3 per share under reduction of income tax. After paying the dividend, the balance on hand is £2,174 0s. 4d., in addition to the sum of £9,910 6s. 11d. returned by the Edinburgh railway company, after the abstract statement had been made up. Regarding this sum, the report states that "it ought not to be dealt with by the present meeting." The report then proceeds—"But it must be satisfactory to learn that there will be so considerable a surplus in hand, after paying the present increased dividend as to maintain the independent position of the company. The attention of the proprietors is called to the fact that, although the more prosperous state of the company's business is owing, among other things, to the amicable understanding entered into by the railway, a considerable portion of it has arisen from a more complete development of their own peculiar resources, which the council have at former times ventured to predict would take place, and which they venture to say will still further be extended—observations justified by the fact that the trade in the Forth and Clyde canal in the half year exceeds by 80,000 tons that of the same period of last year, and that it had increased from under 400,000 tons in the year 1837, to above 900,000 in 1845; and that in the present, it will exceed a million of tons."

**Railways and the Fishing Trade.**—A correspondent of the Newcastle Advertiser from North Sunderland says: "Scarcely any class begins to feel the benefit of railways more than fishermen do. The demand for fresh fish of all kinds has increased so much of late, that when on a visit the other day at Cullercoats, I was present when a merchant agreed to give 21s. per score for all the cod caught at that place during the winter." This is at least 300 per cent. more than can be obtained by the fishermen of Wick for the same commodity.



**Passengers on the Blackwall Railway.**—In 1842, 2,200,000 passengers were carried, and in 1845, 3,200,000. In 1846 there will be, it is estimated, 3,500,000. On last Good Friday there were 10,000 people backwards and forwards to Gravesend. Four-fifths of the pleasure passenger traffic on this line are from the east of Waterloo bridge.

The Railway Chronicle, of December 26, says that, "From our official returns it appears that the amount of traffic for the last week, on upwards of 2760 miles of railway, was 131,141, thus accounted for: 66,054, for the conveyance of passengers only, 36,557, for the carriage of goods, and a remainder of 28,530, for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 14,892.

The Stour Valley is to be leased to the Eastern Union and Bury St. Edmunds. The terms are 4½ per cent. on the capital to be expended, and a division of the profits after that sum.

Mr. Wyndham Harding, the secretary of the Buckinghamshire lines, has been presented by the Institution of Civil Engineers with the Telford Medal (of the first class) for his paper "On the Variation of the Resistances to Railway Trains at various Velocities."

Railways, while they are the ready means for the conveyance, are thought, anomalously enough, to be instrumental in the diminution of sheep, if we may believe Mr. Waddington, M.P., who, at the West Suffolk agricultural dinner, is reported to have said, "He was afraid that the sheep of the country were very fast diminishing. What was the reason for this diminution he could not make out, unless it was that many of the laborers were employed on the railroads at good wages, that they worked very hard, and required greater sustenance than formerly, and that they had caused an increased consumption of mutton."

**Compensations. Gt. Southern and Western, Ireland.**—The verdicts at the court of inquiry, held at Thurles, into the land owners' claims, seems to have produced the desired effects. Amicable settlements have been since rapidly accomplished. In the case of M. Carroll and J. Tracey, who claimed compensation in respect of 2 roods and 18 perches of tillage land, part of a farm which the claimants held as tenants in common, the amount claimed was 80, the sum offered by the company was 46; the jury found a verdict for 34. 8 9. The next case was that of P. Whelan, who claimed in respect of 1 acre 1 rood 20 perches; the sum demanded was 577, the sum offered by the company was 300; the jury found a verdict for 170.

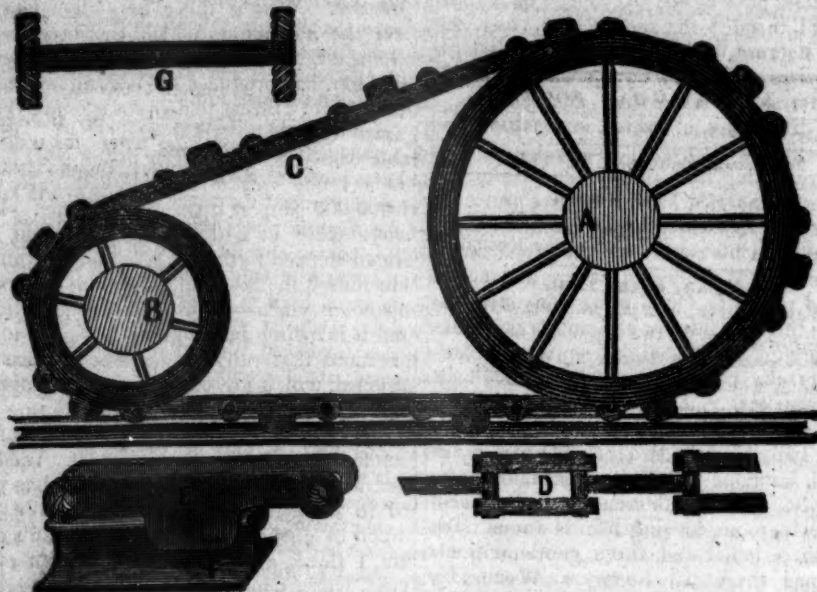
It is estimated that on the yearly supply of the London market—150,000 beasts and 1,600,000 sheep, the saving by railway conveyance is 675,000.

Experiments to test the quantity of coal best adapted for steam purposes are now being carried on in the College of Civil Engineers, Putney.

The North British and Mr. Hudson are reported to have finally concluded their arrangements. Under the guarantee of 8 per cent with half profits, the North British is to pass under Mr. Hudson's management. The transaction will of course have to be submitted to the proprietaries on both sides.

**Cornish Engines.**—The number of pumping engines reported this month is 24. They have consumed 1,471 tons of coal, and lifted 14,000,000 tons of water 10 fathoms high. The average duty of the whole is therefore 53,000 lbs. lifted one foot high by the consumption of a bushel of coal.

## A REVOLVING RAILROAD GRIPER. A NEW INVENTION.



This invention consists in grippers or catches so connected as to form an endless chain, C and D, which is made to revolve around two wheels running in a line over the rail of railroads, in such a manner that the jaws of each gripper, as they come down from over the wheel, will project down the sides of the rail, and fasten to and loosen therefrom as the car advances. Its object is to enable cars to advance or stop at all times, with certainty and safety, both upon level and inclined planes, whether the track be dry, or rendered slippery from any cause.

The grippers consist of two parallel bars E, each furnished with a jaw to project down the sides of the rail F, and connected together at their ends by right and left hand screws. The grippers are connected together by a bar G, having its ends attached to the middle of one of the screws in each. This bar turns the screws which work the jaws to and from the rail. The wheels A and B may be attached to engines and cars, and the motive power conveyed to them by any known means. They are destined to bring the grippers in contact with the rail, but not to support their own or the weight of the engine. The forward wheel should be smaller than the other, in order to give greater motion to the screws and jaws, and both be provided with a flange on each side to guide the chain. The surface of the wheels between the flanges may be made of a number of sides or faces, instead of a circle, in order to prevent the slipping of the wheels in the chain, each side being of the same length as the grippers. The

screws are cut with very oblique threads, in order to give sufficient motion to the jaws. The grippers are opened by the curving of the chain on the wheel, and closed by coming to a line on the rail: thus fastening them to the rail under the foremost wheel, and loosening them therefrom under the rear wheel by the falling and rising of the single link or bar as it comes from or rises to the wheel. The action of the grippers is the same, whether the car moves forward or backward, being placed by the wheel on the rail, and then fastened. As the rear wheel passes over them they are first loosened, then taken up, and carried over to seize the rail again.

This improvement has for its object the removal of the most serious difficulty met with in the use of railroads, viz: the want of sufficient adhesion between the locomotive and the rail to allow the use of the full power of the engine, thus restricting the construction and use of railroads to level plains. The simplicity of its construction and operation, the certainty of its hold upon the rail, both in propelling and stopping trains, and its perfect adaptation to the common locomotive and the T or H rail, strongly recommend its adoption upon railroads, and especially upon those not yet completed, where vast sums of money are necessary to be expended in procuring a level surface for the track. The inventors, Dr. R. F. Stephens and Mr. L. B. Pitcher, of Syracuse, N. Y., have recently obtained a patent for the invention, and are ready to grant rights to railroad companies or individuals—to those who will first adopt its use, upon very favorable terms.



Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

PRINCIPAL CONTENTS.

State Works of Ohio .....	85
Further Extracts from English Papers .....	86
A Revolving Railroad Griper .....	88
Railroads at the East .....	89
Dayton and Springfield Railroad .....	90
Coal .....	90
Water Works of New Orleans .....	90
St. Lawrence and Atlantic Terminus .....	90
Columbus and Lake Erie Railroad .....	91
Belgian Railways .....	91
Railways in India .....	92
Reading Railroad Report .....	93

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INDEX FOR 1846.

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Railroads at the East.

The Yankee Blade, in a late number, gives the following synopsis of the two main lines of railroad proposed eastward, from the city of Portland, Me., in regard to which much has been already said, through the New England press, upon both sides. The editor remarks that "the time is come for the extension of railroad communication to the valley of the Kennebec, is beyond doubt. That the travel and business is now sufficient to make investments in such a road profitable, is certain. But that more than one is required at present, or would be profitable if made now, is very questionable. It is of importance then that but one be attempted at present. What then should be the route adopted for that one?"

Two routes are presented for comparison; both commencing at Portland, and at three miles from that city, proceeding side by side to North Yarmouth, eleven miles. One then bends to the left, and runs by the way of Danville, Auburn, Lewiston, Greene, Leeds, Monmouth, Winthrop, Redfield and Belgrade to the Kennebec at Waterville.

The other inclines slightly at North Yarmouth to the right, and proceeds through Freeport, Brunswick, Topsham, Bowdoinham, Richmond, Gardiner, Hallowell, Augusta and Sidney, to Waterville.

The length of the upper, or Lewiston route, from the depot at Portland, is as follows:

To Danville, as per location of Atlantic and St. Lawrence railroad, is some over 29 miles—say .....	29 miles.
Danville to Lewiston, per Hall's "reconnoissance" .....	6 "
Thence to Sprague's brook, Greene .....	7 "
Thence to Monmouth Centre .....	5 1/2 "
Thence to Winthrop Village .....	5 1/2 "
Thence to Snow's Pond, Belgrade .....	12 1/2 "
Thence to West Waterville .....	9 "
Thence to Waterville .....	5 "
Total .....	79 1/2 miles.

The above distances from Danville to Waterville are taken from the report of Mr. Hall, the engineer, employed by the friends of this route. They are not actual admeasurements (no instrumental survey of the route having been made as yet) and are probably short of the actual distance in the aggregate.

The lower, or Augusta route, according to the report of the engineer, who, with a large corps was engaged in the survey more than two months, and

who vouches for its minute accuracy, is as follows:

From Portland to Brunswick village .....	25 1/2 miles.
Thence through Gardiner village to the centre of Augusta village .....	32 1/2 "
Thence to Waterville (estimated) .....	19 "
Total .....	77 "

This route crosses the Androscoggin 1 1/4 mile from Brunswick. Another route was surveyed, crossing at the falls below Brunswick and Topsham, and joining the first in Richmond. By this route the distance from Portland to Augusta is but 56 1/2 miles, and to Waterville 75 1/2 miles. By adopting the longest route (58 to Augusta) the Androscoggin is crossed at the "narrows," which offers extraordinary facilities for bridging; and the branch from this point will be but 6 1-2 miles to Bath.

The shortest route is thus given, to Waterville, through Gardiner and Augusta. But in view of the question presented, viz: the reaching of the Kennebec from Portland, the matter of distance is in favor of the Augusta route; being by the Lewiston 79 1/2 miles; but touching the valley of the Kennebec at Bowdoinham in only 34 miles, and reaching the commercial heart at Gardiner, in 51 miles. But waiving this point, we will consider, for the purpose of this discussion, Waterville as the place to be reached; and it is settled by the surveys, that the Augusta route to Waterville is as short, if not shorter, than the Lewiston. But some may still doubt whether this be so, for it has become so much a habit in some quarters to speak of the route through Lewiston, as being "across to L.," that people who do not examine for themselves, take it for granted that if it be "across to L.," it must be nearer than to go around by Augusta. Let such but spread a map of the State before them, place one end of a rule upon Portland, or the point of separation in North Yarmouth, and the other upon Waterville, and they will find the straight line to run through Augusta and Hallowell villages; and that Brunswick is one-third nearer the line on one side, than Lewiston is on the other. In fine, it will be seen at a glance, that the Lewiston route bends much farther from the line than does the Augusta, and must of necessity, (unless much freer from curves) be longer than the latter. Whether it be likely to be freer from curves any one may judge upon reading the following extract from Mr. Hayward's report. After remarking that there are "42 miles of straight line," and nearly 10 of perfectly level, and that the remainder is in "grades from the most gentle to those of 39 1-2 feet to the mile," he goes on to say, that "there are very few railroads in New England—none of this length—whose grades and curves are of so unexceptionable a character. With the exception of a very few curves, and those at stations, where, of course, the trains will move slowly, there is nothing to prevent running this road at the rate of 30 to 35 miles per hour." "The gentleness of the grades adapts it to a heavy freighting business; and the directness of the line, its adaptation to a high speed in the trains consistent with safety and convenience, makes it a first class road." It may be proper to remark that Mr. Hayward, the gentleman employed to survey this road, has had great experience in his profession, and that his reputation for skill and judgment stands very high.

The next thing to be considered is, on the line of which route lies the greatest amount of existing population and business?

"On the Lewiston route, commencing at North Yarmouth (and excluding it and Waterville, as those towns are the assumed termini of each road) are the

towns named above, containing collectively a population of about 17,000, and three or four comparatively small business villages, containing in the aggregate perhaps sixty traders. It will be borne in mind, also, that these towns are among the oldest settled in this region, and that their population and business have not materially increased for twenty years.

"On the Augusta route, there is an aggregate population of 44,000; and, exclusive of four villages, each as important as any one on the Lewiston route, embracing five of the largest business towns in Maine, containing more than 500 retail traders and many wholesale merchants, and owning as many tons of shipping, probably, as any other five towns in the State. [Bath is included in the Augusta route, as it is virtually identified with it, being included in the Act of Incorporation, and by the provisions of the act, the branch to Bath is to be completed simultaneously with the completion of the road to Brunswick.] It may not be amiss to remark in illustration of this latter statement, that there have been built on the line of this route, and within five or six miles of it, during the present year, about 60 vessels, averaging nearly 250 tons each, and worth, in the aggregate, \$600,000. It is worthy of observation, also, that the towns on this line have increased their population, at least 10,000 within ten years. Again, were the Lewiston road built, none of the towns upon the proposed Augusta line, and but two or three lying between them, would ever use the road, but as a matter of course continue in the use of the existing modes of travel, until the exigencies of the case shall call into existence a railroad for their accommodation, which would doubtless occur in time.

"On the other hand, were the Augusta road made and the Lewiston not, one half the towns upon the route of the latter, all the intermediate towns, and a large portion of those westwardly of it, would resort to the Augusta one, as they would but be continuing their accustomed routine of business and travel.

"It will be seen, that in this comparison we have kept out of view all the population lying east of the Kennebec river, for no one can fail to perceive that the whole of it would be as well commoded by a road from Waterville, passing through Lewiston; and that three-fourths of it would be vastly more accommodated by the former.

"The question propounded for discussion, at the commencement of this article, must, in view of the foregoing incontrovertible facts, be answered in favor of the Augusta route. Many other facts having a bearing upon the subject might be adduced to the same purpose.

"In a future article, should we find time, and the ground be not previously occupied by an abler pen, we propose to resume the subject, and attempt to show that the business and local intercourse of the towns on the Kennebec river require that they should be connected by a band of iron, as they are now united by a community of interests; and adducing reasons why the great main trunk of railroad communication, for the whole State, should pass upon the Kennebec route."

¶ The Rochester Democrat says that, the companies from Utica to Auburn, contemplate reconstructing their track. To compete successfully with the great southern line, these roads will have to be rebuilt in a substantial manner. We hope there will be no difficulty in the way of running an express train through in the summer. The Utica company proposes to do so if the rest will follow the example.



**Dayton and Springfield Railroad.**

The Dayton Journal publishes the proceedings of a meeting held in that city on Monday evening. Messrs. Beckel and Smith reported that they had an interview with the Board of Directors of the Mad River and Lake Erie railroad at Bellefontain, who expressed themselves anxious to aid the project of connecting Springfield with Dayton. They gave assurance that they would furnish the iron, estimated to cost \$60,000, if sufficient stock could be obtained to grade and prepare the way for the rails, say \$140,000. Messrs. Rench and Gebhard have been authorized by the Board to open books for subscriptions of stock in the Mad River and Lake Erie company, on the footing of the original stockholders. Messrs. Beckel and Smith have authority to procure the right of way, and another committee was raised to put the work under contract, as soon as the subscriptions of stock will warrant it. Engineers will survey the route in a few days, and estimate the cost. The road from Sandusky to Tiffin has yielded 12 per cent. on its cost. Springfield is looked to for a liberal subscription to this enterprise. Success attend our neighbors.

**Coal.**

MR. LYELL, says the Philadelphia Ledger, states that Illinois contains more coal than all Europe.—The authority is as good as any on such a subject, for Mr. Lyell is a very enlightened geologist, and geology furnishes the means of ascertaining the constitution of any region. And whoever will examine the valley of the Mississippi with a geological eye, will say that it ought to contain coal in large quantities, and that the portions bounded by the lakes, the Mississippi and the Ohio ought to be especially fertile in that geological production. The whole State of Illinois must have been covered by the sea of which Lake Michigan is a remnant, and therefore must have received part of the forests torn by flood from the uplands. As the lake gradually receded, Illinois must have been left a marsh, subject to periodical inundations from the lake, the Mississippi and Ohio; and as such, it would receive the forests brought down the lake by these rivers, in these inundations. As the ocean is older than the lakes, so the great rivers must be older than the small; and therefore we take for granted that in the subsidence of waters from the great valley of the Mississippi, that river and the Ohio were the first perennial drains. As the waters continued to subside, all inequalities in the surface of the valley augmented, whether from drifts, deposits, or any other causes, the Wabash and Illinois became perennial drains; and thus the region of Illinois became bounded by one great reservoir, Lake Michigan and three great drains, the Wabash, Ohio, and Mississippi, with two other great drains, the Kaskaskia and Illinois, in the middle. All these continuing to rise and fall periodically, would convey and deposit on the adjoining regions large quantities of drift wood. And as ridges continued to rise between any two of these rivers, they would produce vegetation, which would be swept away by the periodical floods, and be deposited in the low lands by the tributary rivers, or carried by them to the great rivers, to be so deposited in their inundations. And after this periodical destruction of forests had ceased, the periodical inundations of all the streams, great and small, would overlay these ligneous deposits with earth, and thus produce the present region of Illinois, an alluvial soil deposited upon coal beds, and washed by great rivers. All the elements of carbonic formation have been applied to Illinois; and if such formation be not the result, then that re-

gion is an extraordinary exception from the operation of geological laws.

Then taking Mr. Lyell's opinion as correct, we see in this coal a wise provision of Providence, and an abundant source of wealth to that State and the nation. It will be not only a substitute for wood, so deficient in that State, as ordinary fuel, but a substitute for water power, also deficient in that campaign State, in every species of manufacturing, and in steam navigation. The time is not distant when even the immense forests of the Mississippi valley will fail to supply its numerous and increasing steamboats. Then what an abundant source of public convenience and state wealth will be found in these coal beds? And if the great State of Illinois, with its 55,000 square miles, its fertile lands, its navigable rivers, and immense agricultural wealth, also possesses inexhaustible coal beds for itself and the southwestern states, who can doubt its ultimate ability to pay its debts?

**Coal Trade.**

It is stated that the first coal of consequence dug from the mines in Pennsylvania, was in 1820, when 365 tons were sent to market. The increase of the trade since that time has been regular, though very large. The amount sent to market in 1846, previous to November 1st was 2,312,54 tons. The cargo price averaged the last year in Boston, from 25 to 37 cents higher than for the last four years.—Contracts, we understand, have been made, for the coming season for coal in Philadelphia, at the same rate as last year, which, with a probable additional freight, will make the cost of coal here higher than last season.

**Water Works of New Orleans.**

We learn from the New York Herald that the President of the Water Works of the Commercial bank of New Orleans, has made a contract with the Allaire Association of New York, for an engine and hydraulic machinery, to be capable of raising six millions of gallons of water every twenty-four hours. This will, says the Herald, be the largest of the kind in the United States.

**St. Lawrence and Atlantic Terminus.**

The following article, which appeared in a late number of the Portland Argus, eminates, we have reason to believe, from authority—and the facts contained therein may be relied on as correct.

**Terminus and Depot of the Atlantic and St. Lawrence Railroad at Portland.**—The centre line of the road, as it enters the city, runs from the curve round Fish point, on a straight line two thousand eight hundred feet to the northeasterly corner of India wharf, and thence onward in the same straight line to Andrews' or steamboat wharf on the south side of India street. The road is located six rods wide. The shore line of it, after leaving Fish point, lies below low water mark. On the water side of the road, for more than a quarter of a mile in length, vessels drawing 20 feet of water can lie and load. This location carries out the views of the Canadian as well as of the Maine company. Considering that the road is intended principally as a freight road, it combines advantages that the location of no other terminus and depot either in Boston or New England can claim.

1st. Passengers will be landed from the cars at the foot of India street, one of the widest in the city, and in the immediate vicinity of the steamboats and propellers and of

our hotels and boarding houses. Nearly one-half of the passengers that now come to Portland by stages, bound to New York and Boston, in summer take passage by the steamers in preference to the cars. Many also arrive from Boston and elsewhere by the steamers and propellers, bound east and north. To those passengers whose business or destination requires them to stop in the city, or to come or go by the steamers, the accommodations will be everything that can be desired.

2d. But the unquestionable advantage which this location possesses over all others in New England, is the facilities it offers, for the reception, lading, shipment and transshipment of freight. It is well known to every man, whose residence and business have led him to a practical knowledge of the subject, that under ordinary circumstances railroads cannot compete successfully with steamboats, propellers, and in cases of heavy and bulky articles, not even with sailing vessels in the transportation of freight. Most of the flour brought to this place comes by way of New York, and none of it, not even that from Boston, by railroad. Not one ton in two hundred of the freight which passes yearly between this city and Boston, is carried by railroad.

Assuming then as a fact, that in the matter of the transportation of freight, railroads cannot successfully compete with water borne craft, when that craft can move freely without obstruction, or detention, and directly to its port of destination, the superior advantage of this terminus and depot are manifest. The freight brought by the road from the interior comes directly along side of the vessel or steamer that is to receive it: not to be impounded here, as some have represented, nor to be taxed with cartage, truckage and wharfage, as in all other places, but to be transferred, by proper mechanical contrivances, directly from the cars on board the vessel. From the wharf in Portland it will be transported by the cheapest possible conveyance to its place of destination, whether it be Boston, New York, the West Indies, an Eastern, a Western, or an European port. The owner of the freight has therefore afforded him—not a single and limited market, not a nominal but a real choice of markets, with the best and cheapest channel for getting to it. It may be safely assumed that nine-tenths in value, and ninety-nine-hundredths in weight and bulk of the articles transported over the road, if of any comparative value at home, could not bear the tax of a moderate freight over an ordinary railroad of some two or three hundred miles; and yet would pay, and pay handsomely, if the expense were reduced one-half. In the transportation and transshipment of articles such as these, it becomes a matter of the first importance, both to the producer and consumer, to study the means of economising the expenditure. It is with a view to the wants, not of a comparatively small number, but of the great public, the producing and business-doing public, that the road has been located, and the terminus fixed where it is; and it is with the same views that even the gauge, which gives so much



trouble to some of our friends, and excites so much clamor and intrigue elsewhere, has been adopted by the directors. The same remarks which apply to the facilities of transporting merchandize to Portland, for the purpose of exportation, are equally applicable to the facilities afforded for the introduction and transportation of articles for the supply of the interior.

Add to these advantages another not less striking—a steamer, bound to sea, might ordinarily in fifteen minutes after leaving the side of the railroad, be on the broad Atlantic ocean, on her way to her port of destination. And this, too, without the aid or the charge of a pilot.

#### Columbus and Lake Erie Railroad.

The editor of the Sandusky Clarion publishes the following communication in his last paper, which shows that the railroad improvements in that region are "quietly but surely advancing." The editor says the information comes from a source in which the fullest reliance may be placed.

#### Editors of the Sandusky Clarion;

Gentlemen—A meeting of the Directors for the Columbus and Lake Erie railroad company, was holden yesterday at this place. The object of the meeting was to receive a delegation from Newark, and their proposals for subscribing to the capital stock of the company or otherwise to induce an extension from this to that place. The result of meeting this delegation, together with others from important towns along the line, has been such that entire confidence is now established in the rapid completion of something over 50 miles of the road. The enterprising citizens of Licking county, readily perceive the great advantages of a railroad communication with Lake Erie, where the distance is but one-half the length of the Ohio canal from Newark to Cleveland. To secure these advantages, they have shown a liberality equal to the importance of the object. Subscriptions to the capital stock of the company are secured sufficient to warrant letting of contracts embracing so much of the line to Columbus, as lies between Mansfield, Newark and Granville. Engineers will immediately locate that part of the line not previously located, and prepare for commencing operations strong handed.

Of the importance of this enterprize to your citizens, there can be no diversity of opinion. The proper officers of the two companies have entered into a perpetual contract for running the two roads in connection, determining first the width of the track, and securing to the M. and S. C. railroad company the delivery of all article of transport destined for the lake. The contract contemplates running the two roads with the same machinery, defining the rights of parties, and division of earnings and expenses.

It has been remarked by those best acquainted with the results of railroad improvements, that no preestimate has equalled their business or earnings. If this has been their experience, and in view of this, capitalists engage in building such a line of road as the one now being built across the barren region from Ogdensburg to Lake Champlain, how

much more should they be encouraged who have in hand the interest of one hundred miles of road, traversing the richest products of agricultural labor and return freights of merchandize, which will constitute the great bulk of transportation. It is confidently believed by those who live in the vicinity of the Hocking mines and other coal regions adjacent to the line of C. and L. E. railroad, that bituminous coal will constitute the chief article of transport over the road to Lake Erie, making your town the great coal yard for the rich mineral regions of the north, and the country bordering upon the lakes. Be this as it may, there are other and ample assurances of large and remunerating profits to stockholders for the transportation of passengers and the produce of the country.

The extension of a line of railroad from the lake to Newark, so soon to be completed, is a matter of congratulation and great satisfaction to those who have had the enterprize in hand, and especially so, when considered as having triumphed upon its own merits, over rival improvements now begging legislative aid to inveigle foreign capitalists into measures for promoting local interests.

Respectfully,

Mansfield, January 22d, 1847.

#### Belgian Railways.

We have just received the annual report of the Belgian Minister of Public Works—M. A. De Bavay—for 1845. It is very voluminous, and contains 520 pages of tables. It appears that during 1845 that 4,968,052.08 fr. (£198,722) was expended on the railways. The total sum expended in the construction of the 348 miles of railway up to the 31st Dec. 1845, was 149,714,827.14 fr. (£5,988,592), being at the rate of £11,404 per mile. There are 225 miles of double line, and 123 miles of single line. The double lines are Brussels and Antwerp 46 kil. Malines and Gand 57 kil., Ostend and Plassehendael 6 kil., Courtray and the frontier 15 kil., Molines and the frontier of Prussia 133 kil., Brussels and the frontier of France 82 kil., Brain-le-Comte and Goderville 14 kil., Goselias and Charleroy 9 kil.; total, 362 kil.—The single lines are Gand to Plassehendael 60 kil., Gand to Courtenay 44 kil., Mouscron to Torney 19 kil. Landen to St. Trond 10 kil., Goderville to Gosselias 21 kil., Charleroy to Namur 37 kil., Branch at Antwerp 3 kil., and branch at Brussels 3 kil.; total, 197 kil. In 1845 they had 3 new engines with cylinders of 15, 14, 13 inches diameter respectively, 62 new passenger carriages, 292 goods wagons, and 29 other wagons.—So that on the 1st Jan. 1846, the working stock consisted of 149 locomotives, 145 tenders, 684 passenger carriages, 2,200 goods wagons, and 400 other wagons. In March, 1845, orders were given to construct three carriages, such as the one constructed in 1844 on the American system, capable of holding 84 persons, differing, however, from the American plan, by introducing 1st, 2d, and 3d class passengers in the same carriage, (the Americans have only one class) which the report says was found to be a very economical and satisfactory carriage. The fol-

lowing table shows the working expenses, the length of line opened, the number of leagues (3.18 miles) run and the cost per league train.

	Total working expenses.	Length of line open.	Tot. No. of leagues run.	Cost per league train.	Exp'nse per league train.
	Francs.	Leagues.	Leagues.	Francs.	s. d.
1841	4,339,659.17	671	289,726	15.67	4 3
1842	4,700,327.08	791	317,818	14.79	3 11
1843	5,476,615.72	961	375,334	14.59	3 10
1844	5,765,430.80	111 8-10	497,061	11.60	3 1
1845	6,321,575.48	111 8-10	545,302	11.59	3 1

The increase and diminution in the expense per train per league depends upon several circumstances. The number of trains per day, the number of carriages per train, the number of passengers per train and the speed at which the trains travel. The average number of carriages per train in 1844 was 10.5, while in 1845, it amounted to 14.5; the cost per league per train in the former case was 11.60fr., and in the latter but 11.59 fr. The consumption of coke per league per train was in 1844, 57.61 kil. (126 lbs.) and in 1845, 57.17 kil. (128 lbs.) This anomaly is explained by the encouragement given to the engine drivers, stokers, and storekeepers to economise the coke. The former are allowed 25 cents, and the latter 6½ cents; total 31½ cents for each hectolitre (77 lbs.) of coke saved on the amount allowed, which was at the rate of 4 kil. per carriage in a train per league. The amount of coke saved by this means on the quantity allowed, during 1845, was 4,006,310 kil. (3,934 tons,) which at the price of 23.78fr. per 1,000 kil. (nearly 1 ton) amounted to 95,270.05fr.; deduct from this sum 35,770.84fr. (£1,430) paid to stokers, etc., as commission for saving the coke, which leaves a net saving of 59,499.21fr. (2,379) in favor of the state on the quantities usually allowed for the locomotives. The number of passengers carried in 1845:—1st class, 397,606; 2d class, 970,662; 3d class, 2,074,796; total, 3,443,066; soldiers, 10,939; extra persons, 16,673; 27,612: total number carried, 3,470,678; ditto in 1844, 3,381,529; increase 89,144 passengers. The number of passengers carried in September was 13,458; while that in February was but 6,483. The average weight of the luggage of each passenger, in 1845, was 3.21 kil. (7.06 lbs.) and in 1844, 3.12 kil. (6.86 lbs.). In 1845, 6,455,016.64 kil. of merchandize (633,976 tons) was carried; and in 1844, 520,422,667; increase, 125,078,987 kil., or more than 24 per cent. The receipts for passengers, in 1845, were 6,393,309.20fr.; and, in 1844, 6,166,548.94fr.; increase, 226,760.26fr., or about 4 per cent. For goods in 1845, 4,175,593.41fr.; in 1844, 3,323,013.90fr.; increase 852,569.51, or 26 per cent. The total receipts for 1845, amount to 12,403,204.55fr. (£496,128) or £1,426 per mile per annum; in 1844, the rate was £1,291; increase 10½ per cent. The international traffic with Germany amounted to 12½ per cent., and that with France to 8½ per cent., of the total receipts. It is also interesting to know that the working expenses in 1844 were 51.33 per cent. of the receipts, while the dividend on the capital expended was equal to 3.80 per



cent.; 1845, the working expenses were 50.94 per cent., and the dividend on the capital equal to 41.6 per cent. The latter would have amounted to 4.39 per cent. had the carriage of provisions, etc., been taken into account, which were carried gratuitously on the railways for the public benefit.

*Comparison of the Receipts and Working Expenses per league from 1841 to 1845, inclusive.*

Year	Total receipts	Tot. work- ing exp's	Leng. oper'd.	Receipts pr. league.	Ex. per league.	Profit pr. league.
	Francs.	Francs.	Lgs.	Francs.	Fr.	Fr.
1841	6,136,343	4,539,659	67.7	91,902	67,006	24,896
1842	7,461,553	4,700,327	79.3	94,212	59,348	34,864
1843	9,641,269	5,476,616	96.5	93,692	56,752	36,930
1844	11,230,493	5,765,431	111.8	100,452	51,569	48,833
1845	12,403,205	6,321,576	111.8	110,941	56,444	54,398

*Railways in India.*

From the Overland Delhi Gazette, October 19.

**Railway Traffic.**—We have been favored with a detailed table, published in the Delhi Gazette, giving the actual traffic on the grand trunk road, near Cawnpore. The results are briefly, a daily average for the month of September, of:

- 67.2 Hackeries, laden and unladen.
- 13.8 Camels, do do.
- 14.2 Bullocks and ponies, ditto.
- 9.4 Coolies and Banghies, ditto.
- 1.3 Carriages.
- 15.9 Native Bailies.
- 1.2 Palkees.
- 0.4 Elephants.
- 1.1 Doolies.
- 94.0 Horses.
- 1,022.2 Foot passengers.

There is, perhaps, no country in the world with any pretence to civilization, in which there is such an immense mass of unproductive labor, as in India, and stranger still to say, in that species of labor, the carrying trade, if we may so term it, which above all others, entails a constantly recurring expense. Out of 4032 hackeries which passed over the Cawnpore Trunk Road, from the 1st to the 30th of September, inclusive, 3228 were laden, and 804, or one-fifth of the whole number, unladen. We could scarcely have selected a more striking instance in proof of our hypothesis. The fact itself is sufficiently illustrative of the carrying trade, and of the expense of carriage generally—for the unproductive labor must somehow be paid for, and what process so simple, we do not say so expedient, as that which compels the owner of goods to pay at the rate of one-and-a-half tons of goods for every ton thus carried; and yet such is the system in practice generally, in India, and such it perhaps must necessarily be with such lumbering and crazy conveyances as we see daily passing before us. The same remark applies, and perhaps with still greater accuracy, to the transit of smaller parcels as effected by coolies and banghies. The proportion of unproductive labor must be in this instance still lamentably greater, and serves to show how backward this country is in its several and even in its peculiar modes of transit.

With these preliminary remarks we may proceed to examine the valuable registry of

traffic already noticed, at the same time promising that such information as we may glean from the statistical details of one month must necessarily be very imperfect, and more especially when that month happens to be, as in the present instance, the most unfavorable month for traffic in the year. Our acquaintance, moreover, with that particular district is not sufficiently intimate as to enable us to draw any definite conclusion, from the traffic on any one particular line of the road, as that from east to west, as to what it may be also from north to south. Taking the usual loads as undermentioned, for a four-bullock hackery, 20 maunds; an elephant, 20; camel, 6; bullock, 2½; pony, 1½; coolie, ½; and, making due allowance for such conveyances as passed unladen, we find, with that safe proviso, errors excepted, that the average daily amount of goods exceeded in weight 43 tons. On the principles that money makes money, and that railways create traffic, this amount would be considerably increased, and there would be, supposing the charge not very exorbitant, at least 60 tons of goods available for despatch daily, and as the average weight of a Manchester and Liverpool train is, if we recollect rightly, about 47 tons, there would be a sufficient supply, under any circumstance, for a daily train up and down in one isolated district.

The average cost for conveyances of goods by land carriage in India may be estimated at 30 rupees per ton (27½ maunds) every 100 miles. By a railway at the ordinary rate of 2.68 pence per ton per mile, at the average velocity, it would be 13 rupees per ton per 100 miles. Here then there would be an actual saving, in the mere cost of conveyance, of nearly 200 per cent., and this saving, in addition to the other unnumbered advantages which increased speed affords, would act more powerfully to bring into action the productive resources of India than any legislative enactment or any system of bolstering privileges whatever. In the registry of traffic on which these remarks are founded, are not included, we have reason to infer, any return of Government stores, which are constantly passing through the country. These latter, we understand, except in time of war or when there is any unusual emergency, are forwarded by river transit, when such is available, and must, therefore, have been overlooked when the statement of traffic was being prepared. But as the railway companies may reckon with every confidence on the employment which Government can furnish, we have only to add the amount of those stores to the general traffic of the country, and we shall form by no means a disheartening estimate of the amount of goods available for transit.

It would be difficult, or perhaps next to impossible, to form even any approximate guess of the number of travellers who could afford to pay the fare, however low it may be, for railway travelling. The table under consideration furnishes us with a sufficiently distinct view of the number of travellers on that particular road. The total is somewhat startling; more than 1200 are daily passing

on that road, and yet how few of these could afford to pay even at the rate of a pice per mile. The number passing daily in carriages and native conveyances, palkees and doolies, at the lowest average, exceeds 48, and of these perhaps 20 could afford to pay for a seat in a train. The number passing on horses and ponies is placed at 94, and of these perhaps a fifth part would give up the horse for the rail. We have at this rate, without including any from the foot-passenger class, about 35 travellers daily like to avail themselves of the accommodation thus offered. If the charge for third class passengers be sufficiently low, something slightly in excess of that charged for goods, we might multiply this number by ten, and give the result as the daily average amount of railway passengers. We have to add to this the charge for conveyance of the mails and Government servants, and shall even then form a very inadequate idea of the extent of travelling which railways would create. We have only to multiply these results by ten—perhaps by a hundred—in order to gain a more correct estimate of the amount of traffic in a single section of the country. The railway system, like the human frame, is wonderful and complex in all its parts; and if the system be healthy, all its movements are regulated with unerring precision. As it is impossible to guess from the infant in arms whether he may turn out eventually a giant or a pigmy in stature and strength, so is it impossible to guess, especially under circumstances so novel, and in such an immense breadth of country, whether a railway can even here possibly present those gigantic combinations which elsewhere it has confessedly displayed. A railway may be easily projected, and as far as the difficulties of engineering are concerned, as easily made; but it can only thrive by unremitting vigilance on the part of its conductors, and by the line having been so judiciously selected as to embrace the requirements of the country, and to unite its main arteries. A railway, so we are told, now connects the Falls of Niagara with the remotest parts of Albany, and what was formerly a fatiguing tour of many weeks, may now be passed over with ease at the rate of 16 miles an hour. Cities containing a population of 20,000 souls, now occupy sites on which, about twenty-five years ago, log-cabins were constructed. The extremes of civilization may be there said to meet, for groups of Indians, lately the unprofitable owners of the broad lands around, assemble to offer for sale at the various station-houses their simple trinkets, and gaze at the ponderous machine as it rushes forward to its destination. And why may not the same results be anticipated in a country like India, in which everything is in an infinitely higher state of advancement, and which has enjoyed in such an eminent degree, so long an interval of rest and security? The Report of the Railway Directors proves, if any proofs are required, the feasibility of railways. The registry of traffic, on which we have commented, proves likewise that there is a sufficiency of goods for transit, and thus has the first



pebble been thrown, which, in due time, by the zeal of the passers by, will be converted into a mountain.

#### Reading Railroad Report for 1846.

We have received a copy of the annual report of this company. It is full and explicit, giving full details in the different departments. The amount of coal brought down was not quite equal to the estimate in the last annual report—owing to the severe "fresnet in May, and the great falling off in demand for coal in August and September," but the receipts for the year were greater than the estimate.

We only give, this week, the report of the President, JOHN TUCKER, Esq., as it came to hand at a late hour, when the Journal was nearly ready for the press—but the next number will contain the remainder, with all the details. By referring to the last year's report—see RR. J. page 171—it will be seen on reading this, that there has been a large increase of power and ability to meet the demands of the public; and we may anticipate for the company a considerable increase of business the ensuing year. We shall, in our next, refer more at length to the subject.

#### Report of the President and Managers of the Philadelphia and Reading Railroad Company to the Stockholders, January 12, 1847.

#### To the Stockholders of the Philadelphia and Reading Railroad Company.

The Managers have the pleasure of stating that the profits derived from the business for the year ending November 30th, 1846, are even greater than they predicted at your last meeting.

They can also state, that there is still the same desire to secure the facilities which the company possess for the transportation of coal, as existed at the close of the previous year.

A table of the anthracite coal trade (prepared by the Philadelphia Commercial List) for the year, is appended. It shows an increase in the consumption over that of the last year, of 297,626 tons, of which 153,159 tons have been furnished from the Schuylkill region.

The usual statement of the Treasurer, showing the financial position of the company, is herewith submitted. Also an account of the profits resulting from the business.

It will be observed that the net revenue for the year is \$1,037,795 21, showing an increase over that of the former year of \$530,490 22.

The expenditures for new machinery and for necessary and consequent permanent improvements, are fully explained in the accompanying statements, with the exception of the following items, viz:

Railroad iron for 84 miles new track, sidings, etc.....	\$50,087 05
Land damages, and settlement of claims previously adjusted, strictly appertaining to the business of previous years and the cost of the road.....	28,769 68
	\$78,856 73

The disbursements for other purposes are given in such minute detail in the reports annexed, that further allusion to them here is deemed unnecessary.

The increase in the receipts over those of last year, from

The transportation of coal is 713,726 00 or 80 p. c.  
" " merchandise 76,995 78 or 187 p. c.  
" " passengers... 33,337 94 or 37 p. c.

\$829,061 73

The managers regard this result, as showing conclusively the propriety of the expenditure by which it was produced.

During the ensuing year, it is not the intention of the Managers to increase the quantity of machinery further than to obtain the four locomotive engines authorized at the last meeting, which were then ordered, but have not been received by the company, in consequence of a departure from the terms of the contract.

The policy of gradually changing the wooden bridges into stone or iron, as they require extensive repairs, will be continued. The propriety of this course cannot be doubted, as the saving when thus changed is vastly more than the interest on the increased cost. They are now in such good condition that it is not, at present, proposed to alter many of them.

The expenditures will, therefore, be small during the ensuing year.

The Managers for the first time, have now the pleasure of calling your attention to the subject of a dividend.

The profit and loss account of the year results as follows, viz:

Gross receipts from all sources.....	1,900,115 35
Deduct all expenses.....	862,320 14
" Interest.....	571,119 93
" Taxes, etc.....	16,380 19
" Commissions & charges.....	43,672 61
" Sundries.....	4,330 19
	1,497,823 06

Balance applicable to a dividend fund, or upwards of 124 per cent.....\$402,292 29

If the proprietors had taken Stock at par as contemplated by the charter, to provide funds for the payments for the new machinery, which you directed should be obtained at the last meeting, and for other consequent improvements, this fund would now be in the hands of the treasurer.

But as no such provision was made, the revenue has been applied towards the payments for this new property, and a dividend in money is therefore impracticable.

Under these circumstances, the question of the propriety of a dividend in shares, has had the serious consideration of the managers, but as they do not feel themselves authorized to create new stock, without your sanction, they refer this subject to you and ask for your instructions.

While the debt remains so large, the managers urge upon you the importance of adopting at present, and for the future, such permanent course in reference to the subject of dividends, as will give the company (to the extent of its profits) the means to pay the bonds as they mature, or insure the conversion of the debt into stock.

The policy of making dividends in stock, insures a gradual decrease of the debt. This course is subject to no well founded objection, and is common elsewhere with the most prosperous institutions.

The profits are thus reserved for the diminution of the debt, or for the acquisition of

new property to increase the revenue, and thus each successive year the company is placed in a more independent and prosperous position.

By the adoption of this system, the stockholder may confidently expect to receive more than the bondholder, while the latter cannot but approve of the measure, as the profits are applied to the liquidation of the debt, or to increase the property of the company, by which the security of the creditor is enhanced.

With these views, the whole matter is submitted, as one peculiarly within your province for decision.

The managers think it not improper to remind you of the accuracy of the estimate made a year since, of the business and profits. The period, for which the estimate was made, was from January 1st to December 31st, 1846.

The tonnage (Coal and Merchandise) transported during that year, differs only..... 27,566 Tons.

Through passengers for same time... 8,061

Profits or revenue from the business from Dec. 1, 1845, to Nov. 30, 1846, \$49,775 21

(The profits for December, 1846, not yet made up.)

In each item, the anticipations then expressed, have been exceeded.

The Managers feel that the permanent prosperity of the company is fully established. Their past Predictions of the capacity of the coal machinery and of the cost of transporting that fuel to market, have been fully confirmed, and they deem it unnecessary for them to give any detailed estimate of the future business, farther than to express their confident belief, that the report of the ensuing year will not be less than that they now present.

By order of the Board of Managers,  
JOHN TUCKER, President.  
Office of the Philadelphia and Reading Railroad Company, Philad., January 8th, 1847.

President.—JOHN TUCKER.

Managers.—Charles H. Fisher, Samuel Norris, John Towne, William R. Lejeu, Christopher Loeser, of Orwigsburg, Matthias S. Richards, of Reading.

Secretary and Treasurer.—Samuel Bradford.

(To be Continued.)

The turnpike tolls from Pelham-lane gate to Deptford Hill and Bromley Common gates which were last year let for the sum of 12,530l., have just been taken for 11,470l.

The Northern of France have introduced heaters of hot water into the first class carriages.

Cape Cod Branch Railroad.—It has been repeatedly stated that the stock of this road had been all subscribed. This is a mistake; \$100,000 are now wanting; but we are assured that it will soon be all taken up. The following sums were last week subscribed by three gentlemen in Boston, of Cape Cod origin: \$10,000, \$6,000, \$4,000.

Railroad Stockholders under Laws of Vermont.—The court in Vermont has given an opinion in favor of the Vermont Central railroad company, in the case of said corporation



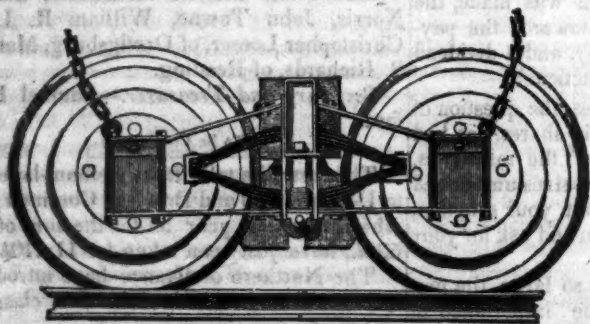
against one of their delinquent stockholders. We believe this is the first case which has been decided in the state of Vermont as to the liabilities of railroad stockholders.

**Perpetual Motion.**—The Hartford Times says that a machine is now on exhibition in that city, which is claimed to be capable of producing perpetual motion. It is running now, and will be during the continuance of the fair. It is an ingenious contrivance, truly, and may lead to useful improvements in machinery, if it does not prove capable, in itself, of driving powerful machinery; and its owners claim this merit for it. The motion (turning of a wheel) is procured by a spring, similar to that of a watch, and the continued winding up is performed by the expansion and contraction of fluid, (oil is used, though quicksilver is undoubtedly preferable) confined, as in a thermometer, at the base of a rod upon which it acts as the change in the temperature of the atmosphere expands or contracts it. By an ingenious contrivance the revolving axle is made to turn the same way, whether the tendency of the fluid be up or down. The capacity of the machine now on exhibition is sufficient to raise 400 pounds, and the slightest variation from heat to cold acts upon the "winding up" part of the machine. The proprietors says a clock was attached to one of these machines about two years since, and it has kept it wound up, so that it has run constantly to this time. It is the invention of Col. Boon, of Ohio, who has spent a life and a fortune upon it.

**RAILWAY IRON.—THE BEST QUALITY** of English Heavy H Rails—60 lbs. to the yard—now in store, landing from the vessel, and on ship board to arrive, for sale on most favorable terms by  
**DAVIS, BROOKS & CO.,**  
Jan. 3. [117] 68 Broad St., New York.

**BACK VOLUMES OF THE RAILROAD JOURNAL** for sale at the office, No. 105 Chestnut street.

**RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER** having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

# LOCOMOTIVE AND CAR AXLES.

The Subscribers are now prepared to receive orders for the well known and approved *Reading Locomotive and Car Axles*—drawn to any required pattern from *Bloom Iron only*. Address

**SAM'L KIMBER & CO.,**  
Willow Street Wharf,  
Philadelphia, Pa.

# NOTICE TO RAILROAD CONTRACTORS.

Proposals will be received at the Office of the Boston and Maine Railroad, No. 60 State street, Boston, until Monday, the 8th day of February next, for the Graduation and Masonry on the line of Road in Andover, between the Merrimack River and a point of intersection with the old Road.

For examination of profile and work, application may be made at the office of the Engineers, at the Depot in South Andover.

**THOMAS WEST, President**  
Boston and Maine Railroad.

January 22, 1847.

# NOTICE TO RAILROAD CONTRACTORS.

Proposals will be received by the Subscriber, at the office of the Michigan Central Railroad Company, at Detroit, until the 16th day of February next, for Grading the first thirteen miles of the Extension of the Michigan Central Railroad, from Kalamazoo, westward; said thirteen miles contains about four hundred thousand cubic yards of earth work. Plans and Specifications will be ready for examination at the office of the subscriber after February 1st.

**J. W. BROOKS, Supt. & Eng.**  
Detroit, January 5, 1847.

**A. & G. RALSTON & CO., NO. 4**  
South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz: 180 tons 2½ x 1 inch Flat Punched Rails, 20 ft. long. 25 " 2½ x 1 " Flange Iron Rails. 75 " 1 x 1 " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Bolt and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

# RAILROAD IRON.—THE NEW JERSEY

Iron Company, Boonton, N. J., are now preparing to make Railroad Bars, and are ready to take orders or make contracts for Rails, deliverable after the first of December next. Apply to

**FULLER & BROWN, Agent,**  
No. 139 Greenwich, corner of Cedar street.  
September 18, 1846.

# NICOLL'S PATENT SAFETY SWITCH

for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee  
**G. A. NICOLLS,**  
Reading, Pa.

# RAILROAD IRON.—THE SUBSCRIBER'S

New Rail Iron Mill at Phoenixville, Pa., is expected to be ready to go into operation by the 1st of September, and will be capable of turning out 30 to 40 tons or finished Rails per day. They are now prepared to receive orders to that extent, deliverable after the 1st of October next, for heavy rails of any pattern now in use, equal in quality and finish to best imported.

**PIG IRON.**—They are also receiving weekly 150 to 200 tons of No. 1 Phoenix Foundry Iron, well adapted for light castings.

**REEVES, BUCK & CO,**  
45 North Water St., Philadelphia,  
or by their Agent, **ROBT. NICHOLS,**  
79 Water St., New York

# THE SUBSCRIBERS, AGENTS FOR

the sale of  
Codorus,  
Glendon,  
Spring Mill and  
Valley, } Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

**SAM'L KIMBER & CO.,**  
59 North Wharves,  
Philadelphia, Pa.

Jan. 14, 1846. [174]

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

**W. H. CALKINS, and Others.**

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed.]

**WILLIAM ROE, Supt of Power.**

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed.] **G. A. NICOLL,**

Supt Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed.] **T. L. SMITH,**

Jersey City, November 4, 1845.

**N. Jersey Railroad and Transp. Co.**

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot,

[Signed.] **JOHN LEACH,**

Jamaica November 12, 1845.

Supt Motive Power.





### RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

#### TEST No. 10.

*Certificate from Mr. Silas C. Field, of Vicksburg, Mississippi.*

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

#### TEST No. 11.—Certificate.

By the fire which occurred in this village on the 27th July last, our Law Office, together with many other buildings, was destroyed—we had in our office one of Rich's Improved Patent Salamander Safes, which, though heated red hot, preserved, without being the least damaged, many papers valuable to our clients—the envelopes of a few papers being slightly scorched. Some twenty-four hours after the fire, the Safe was removed, and so hot was it, that several hours were required for it to cool off. Our office was in the second story of a large brick building, all the wood used in construction of said house being pitch pine. While the Safe was red hot, one of the walls tumbled in, and so injured the lock that it was necessary to break the door open. From this test, we feel no hesitancy in recommending "Rich's Patent Salamander Safe" as *entirely fire proof*.

GOREE & KING.

Marion, Ala., Sept. 15th, 1846.

*Still other Tests in the Great Fire of July 19, 1845.*

The undersigned purchased of A. S. Martin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was parched by the extreme heat. RICHARDS & CHONKHITE.

Benton, Miss., December 27, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Martin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards. (Signed,) WM. BLOODGOOD.

New York, 21st July, 1845.

Reference made to upwards of nine hundred and fifty merchants, cashiers, brokers, and officers of courts and counties, who have Rich's Safe's in use.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by A. S. MARVIN, General Agent,

138½ Water st., N. Y.

Also by Isaac Bridge 76 Magazine street, New Orleans.

Also by Lewis M Hatch, 120 Meeting street Charleston, S. C.

16 11

### FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg, and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

••• The letters in the figures refer to the article given in the Journal of June, 1844.

ja45

### PATENT HAMMERED RAILROAD, SHIP AND BOAT SPIKES.

The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y. The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Eting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

### MACHINE WORKS OF ROGERS,

Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

#### Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, 445 Paterson, N. J., or 60 Wall street, N. York.

### PATENT RAILROAD, SHIP AND BOAT SPIKES.

The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 223 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

••• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

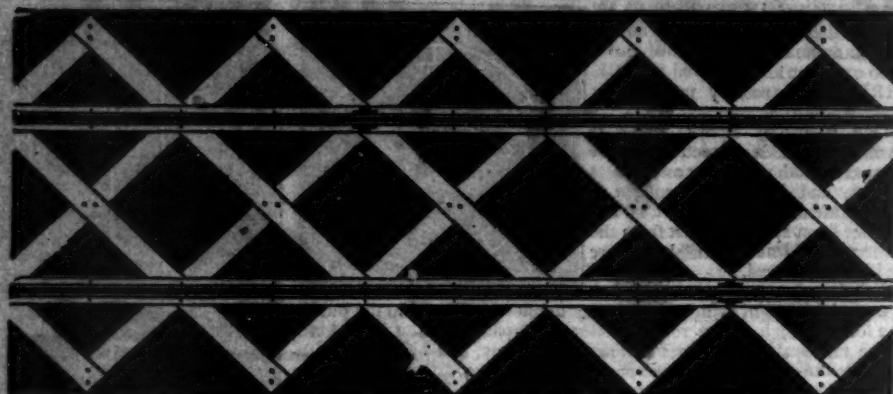
### DAVENPORT & BRIDGES CONTINUE

to Manufacture to Order, at their Works, in Cambridgeport, Mass., Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.



## THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

**THE UNDERSIGNED RESPECTFULLY** invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes

but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.	
4,224 Timbers, 11 ft. long, 3 x 6 inches =	68,696 ft. b.m., at \$10 = \$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. =	4,403 ft. b.m., at \$13 = 57 24
13,000 Spikes = 2,250 lbs. at 4½ cts. =	101 25
Workmanship free of patent charge =	600 00

Cost of one mile including the laying of the Rail ..... \$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia. 33rd

## ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—

for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,

75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.			HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.	Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	
	INCH.	LBS. OZ.	INCH.	LBS. OZ.		LBS.	INCH.	Tons.
11	4½	13 5	10	24 -		50	15-16	20
13	3½	8 3	8½	16 -		27	11-16	13½
14	3½	6 11	7½	12 8		17	9-16	10½
15	2½	5 2	6½	9 4		13½	1-2	7½
16	2½	4 3	6	8 8		10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24

ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY EDMUND DRAPER, Surviving partner of STANCLIFFE & DRAPER.



No 23 Pear street, 1y10 near Third, below Walnut, Philadelphia.

## LAP—WELDED WROUGHT IRON TUBES

FOR

## TUBULAR BOILERS,

FROM 11-4 TO 6 INCHES DIAMETER,

and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

1y25

28 Platt street, New York.

## RAILROAD IRON.

## MOUNT SAVAGE IRON WORKS

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address

J. M. HOWE,

Pres't. Mt. Savage Iron Works, Maryland.

**RAILROAD IRON.—THE "MONTGOMERY" Iron Company,** Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to **MURDOCK, LEAVITT & CO.,** Agents.

1y48

77 Pine St., New York.

**RAILWAY IRON.—DAVIS, BROOKS & Co.,** No. 68 Broad Street, have now in port on Ship-board, 900 Tons of the best English heavy H Rails, 60 lbs. to the lineal yard, which they offer for sale on favorable terms, also, about 6 to 700 Tons now on the way, to arrive shortly, of the same description of Rail.

Nov. 16, 1846.

46th

## ENGINEERS and MACHINISTS.

THOMAS PROSSER, 28 Platt St. N. Y. (See Adv.)

J. F. WINSLOW, Albany Iron and Nail Works Troy, N. Y. (See Adv.)

TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)

ROGERS, KETCHUM & GROSVENOR, Paterson, N. J. (See Adv.)

S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)

NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)

FRENCH & BAIRD, Philadelphia. (See Adv.)

NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)

ROSS WINANS, Baltimore, Md.

CYRUS ALGER & Co., South Boston Iron Co.

SETH ADAMS, Engineer, South Boston.

STILLMAN, ALLEN & Co., N. Y.

JAS. P. ALLAIRE, N. Y.

PHENIX FOUNDRY, N. Y.

ANDREW MENEELY, West Troy.

JOHN F. STARR, Philadelphia, Pa.

MERRICK & TOWNE, do.

HINCKLEY & DRURY, Boston.

C. C. ALGER, Stockbridge Iron Works Stockbridge, Mass.